

# Iowa Peace Officers' Retirement, Accident and Disability System

## Presentation to the Public Retirement Systems Committee

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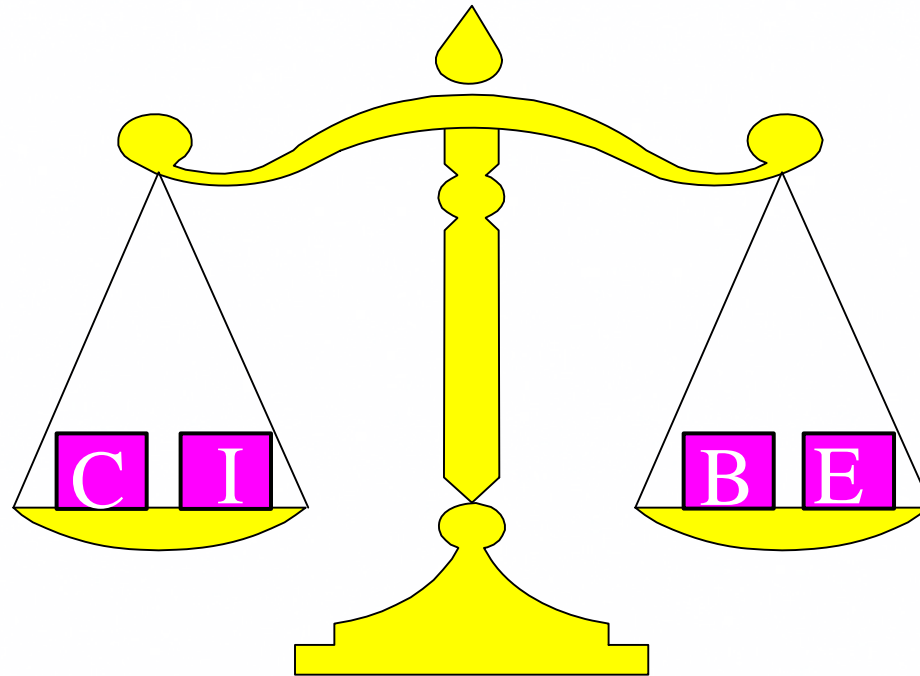
November 9, 2009



## ***Purpose of the Actuarial Valuation***

- Monitor the financial health of the system
- Measure the experience over past 12 months and its impact on system's funding
- Evaluate the funding plan and adjust the actuarial contribution rate

# *Funding a Retirement Program*



C = Contributions  
I = Investment Income

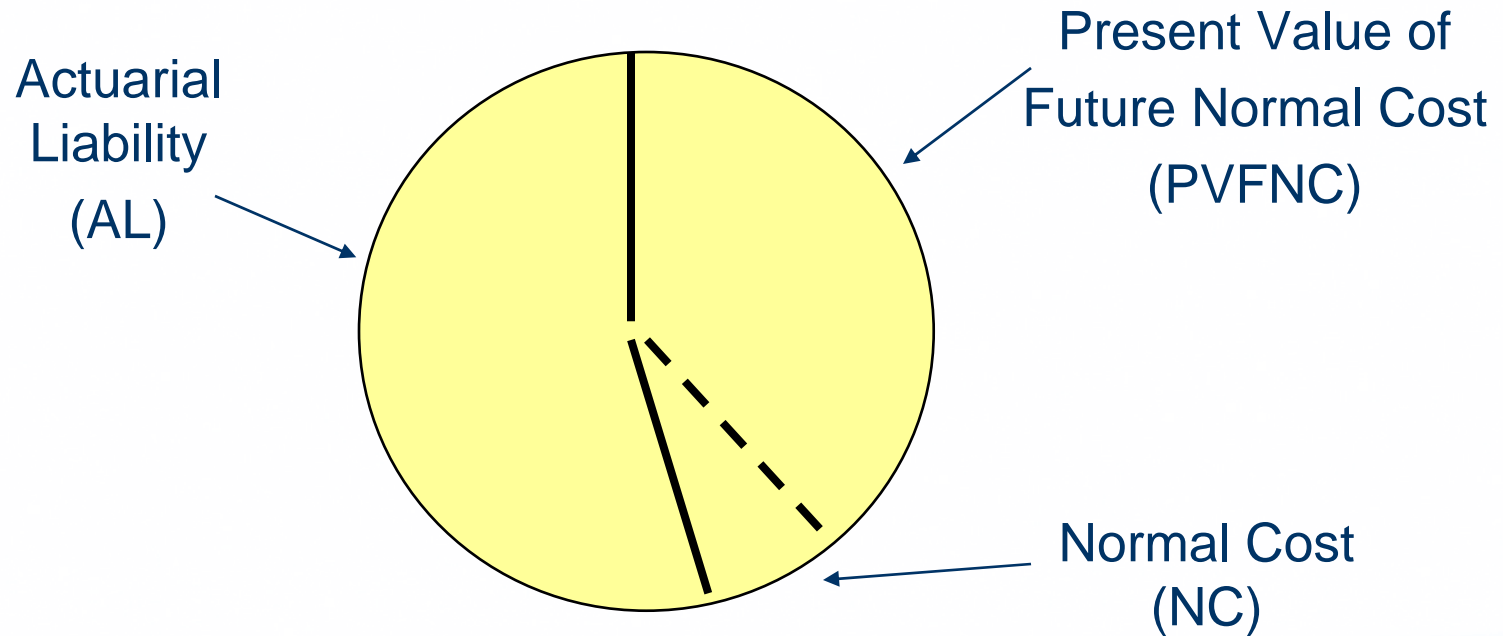
B = Benefits  
E = Expenses

# *Actuarial Terminology*

- Total Liability: value of future benefit payments in today's dollars
- Normal Cost: allocation of benefit cost to current year of service worked by actives
- Actuarial Liability: Target asset value based on the financing mechanism, assumptions, benefit structure and membership

# Actuarial Valuation Process

- Allocates Present Value of Future Benefits into past, current and future service



# *Actuarial Terminology*

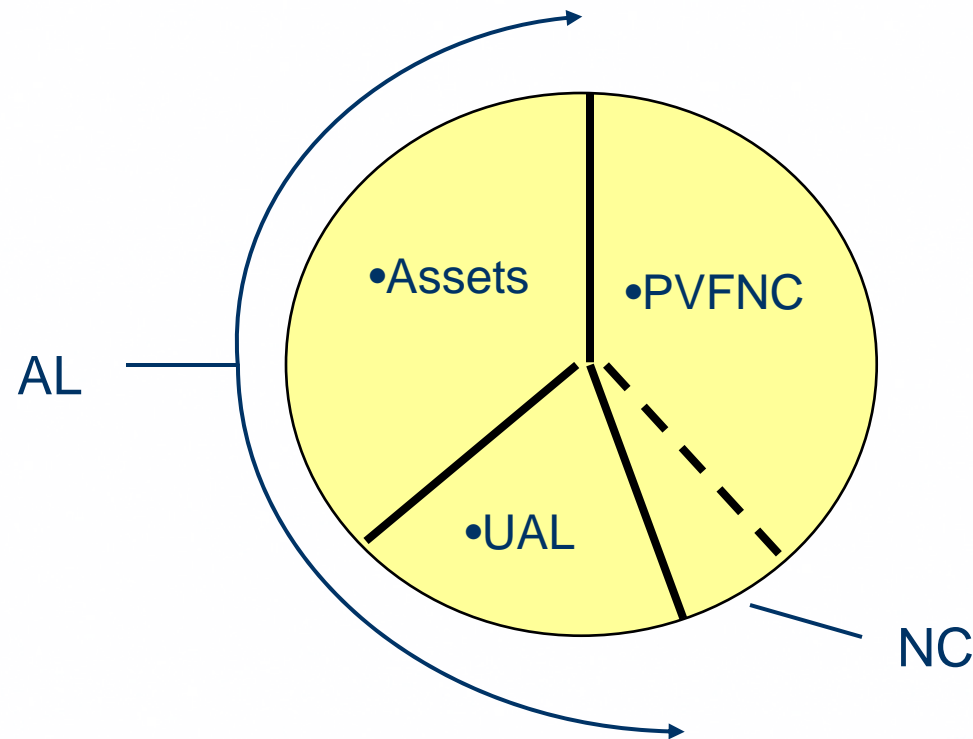
- Actuarial Assets: Smoothed value of assets used in the valuation process
- Unfunded Actuarial Liability (UAL): Actuarial Liability minus Actuarial Assets
- Actuarial Contribution Rate: Sum of Normal Cost and UAL payment

# ***Actuarial Valuation Process***

- Calculation of Liabilities (present value of future benefits)
- Allocate to past, current and future years of service
  - Past: actuarial accrued liability (AAL)
  - Current: normal cost
  - Future: future normal cost
- Calculate actuarial value of assets (AVA)
- Calculate unfunded actuarial accrued liability (UAAL)
  - AAL minus AVA
- Actuarial contribution rate
  - Normal cost
  - UAAL contribution

# *Unfunded Actuarial Liability (UAL)*

- Assets considered to fund portion of prior service liability (AL)
- $UAL = AL - AVA$



## ***POR Key Measurements (\$M)***

	<u><b>July 1, 2009</b></u>	<u><b>July 1, 2008</b></u>
Actuarial Accrued Liability	\$ 433	\$ 417
Actuarial Assets	<u>300</u>	<u>307</u>
Unfunded AAL	\$ 133	\$ 110
Funded Ratio (AVA)	69%	74%
Market Value Assets	\$233	\$290
Funded Ratio (MVA)	54%	70%

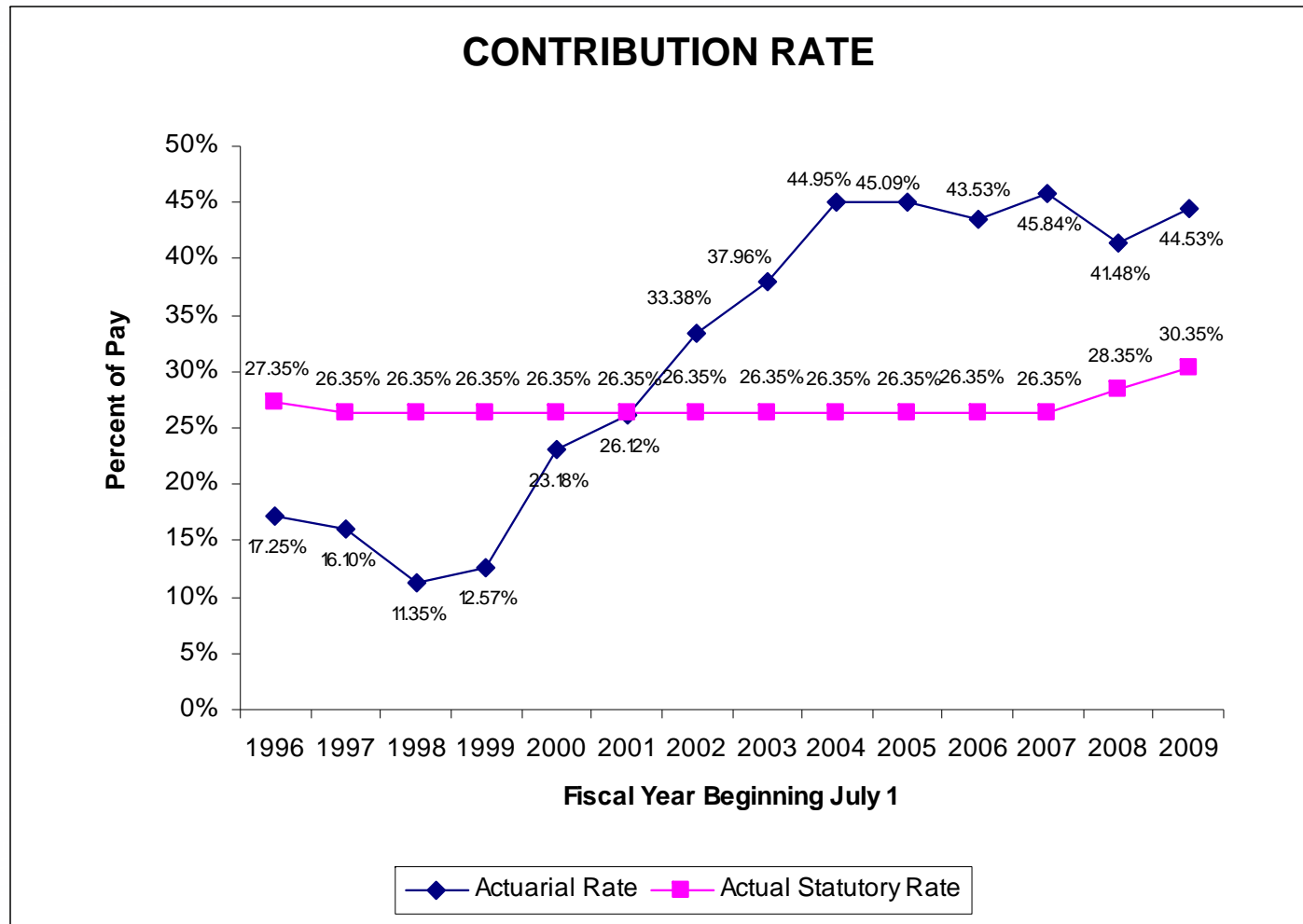
## ***POR Unfunded Actuarial Accrued Liability (UAAL)***

UAAL July 1, 2008	\$110
• Contributions below actuarial rate	6
• Expected increase from amortization	2
• Investment experience	22
• Liability experience	(7)
• Change in actuarial assumptions	0
UAAL July 1, 2009	\$133

## ***POR Key Measurements***

	<u><b>July 1, 2009</b></u>	<u><b>July 1, 2008</b></u>
Normal Cost	26.20%	26.19%
UAAL Payment	<u>18.33%</u>	<u>15.29%</u>
Total Actuarial Rate	44.53%	41.48%
Member Rate	<u>(9.35%)</u>	<u>(9.35%)</u>
Employer Rate	35.18%	32.13%
Statutory Rate	(21.00%)	(19.00%)
<b>Shortfall</b>	<b>14.18%</b>	<b>13.13%</b>

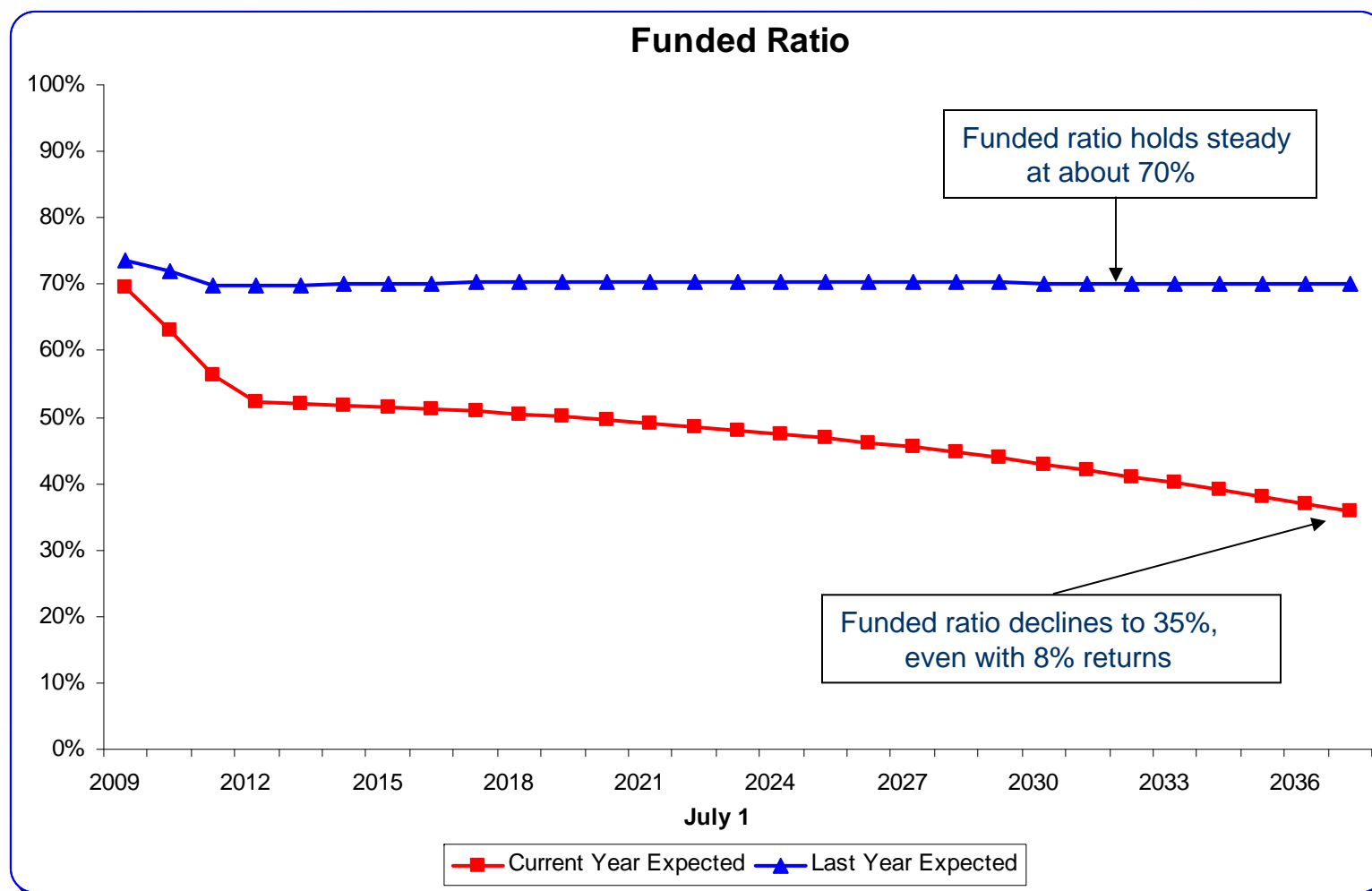
# Historical Contribution Rates



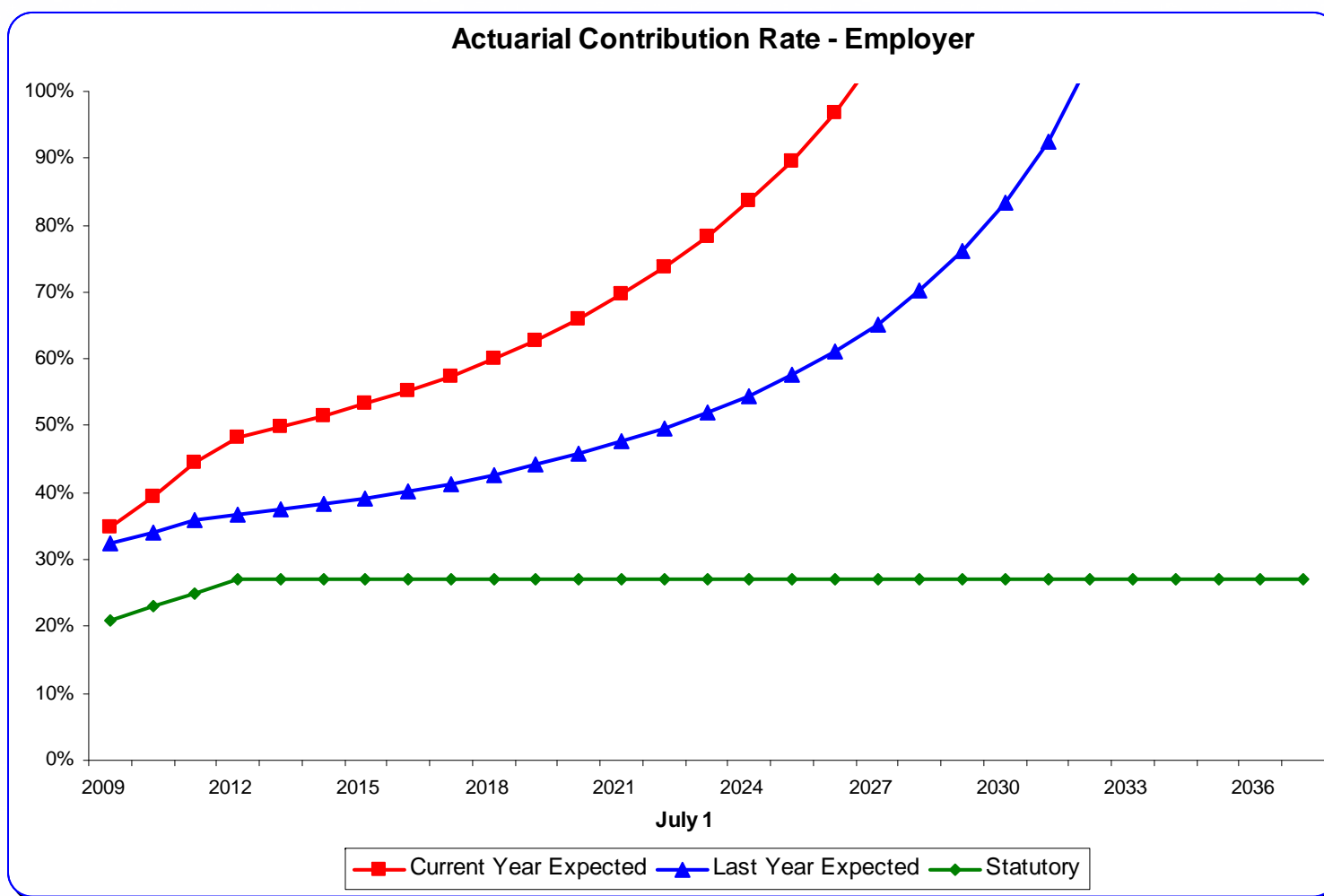
# ***Funding Projections***

- Based on 2007 valuation model. Update using 2009 valuation results not yet completed.
- Not precise predictions but general estimates/trends
- Based on many assumptions
  - All actuarial assumptions met unless otherwise noted
  - Current plan provisions
  - Current statutory contribution rates

# Long-Term Funding Concerns



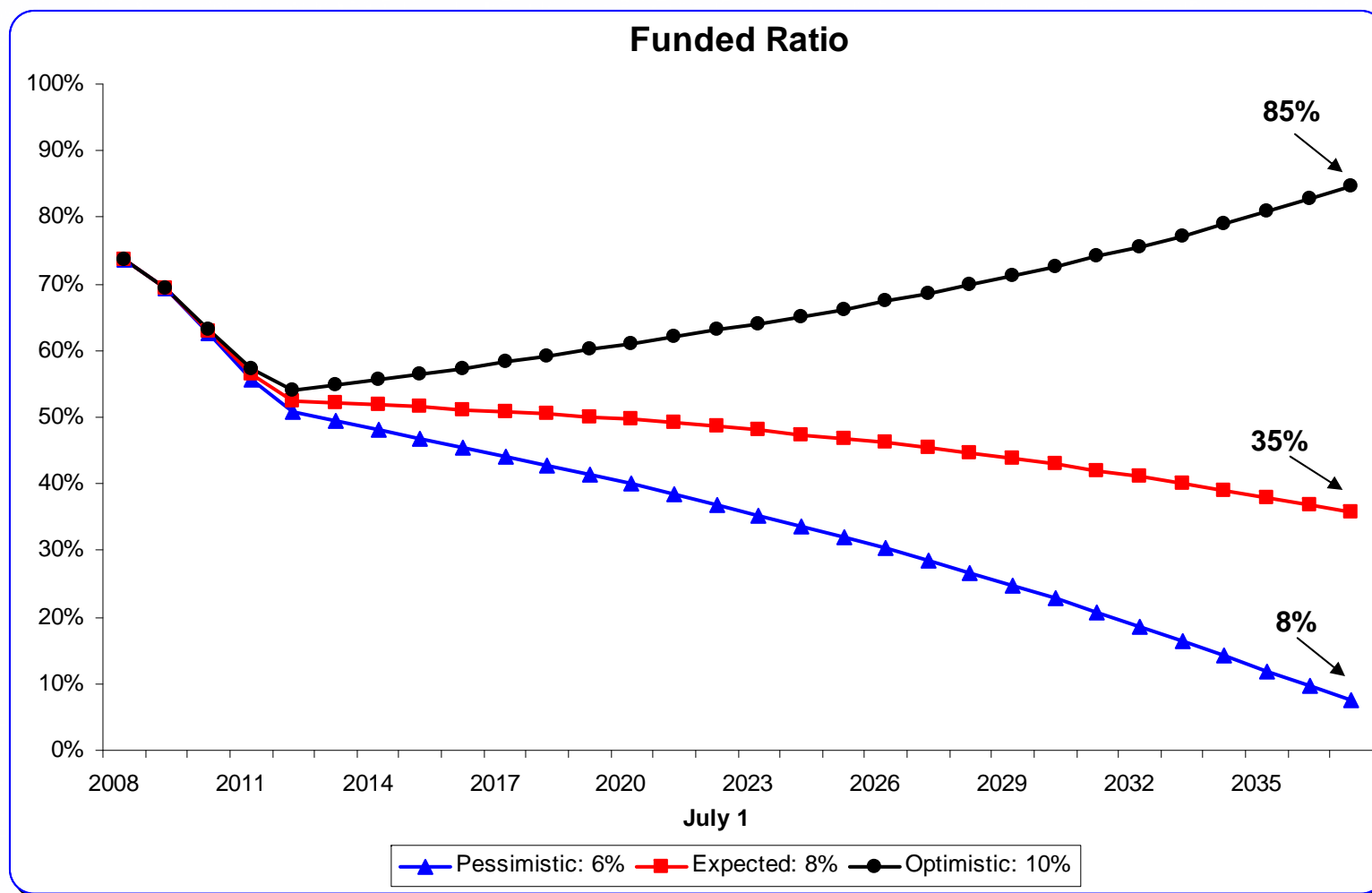
# Long-Term Funding Concerns



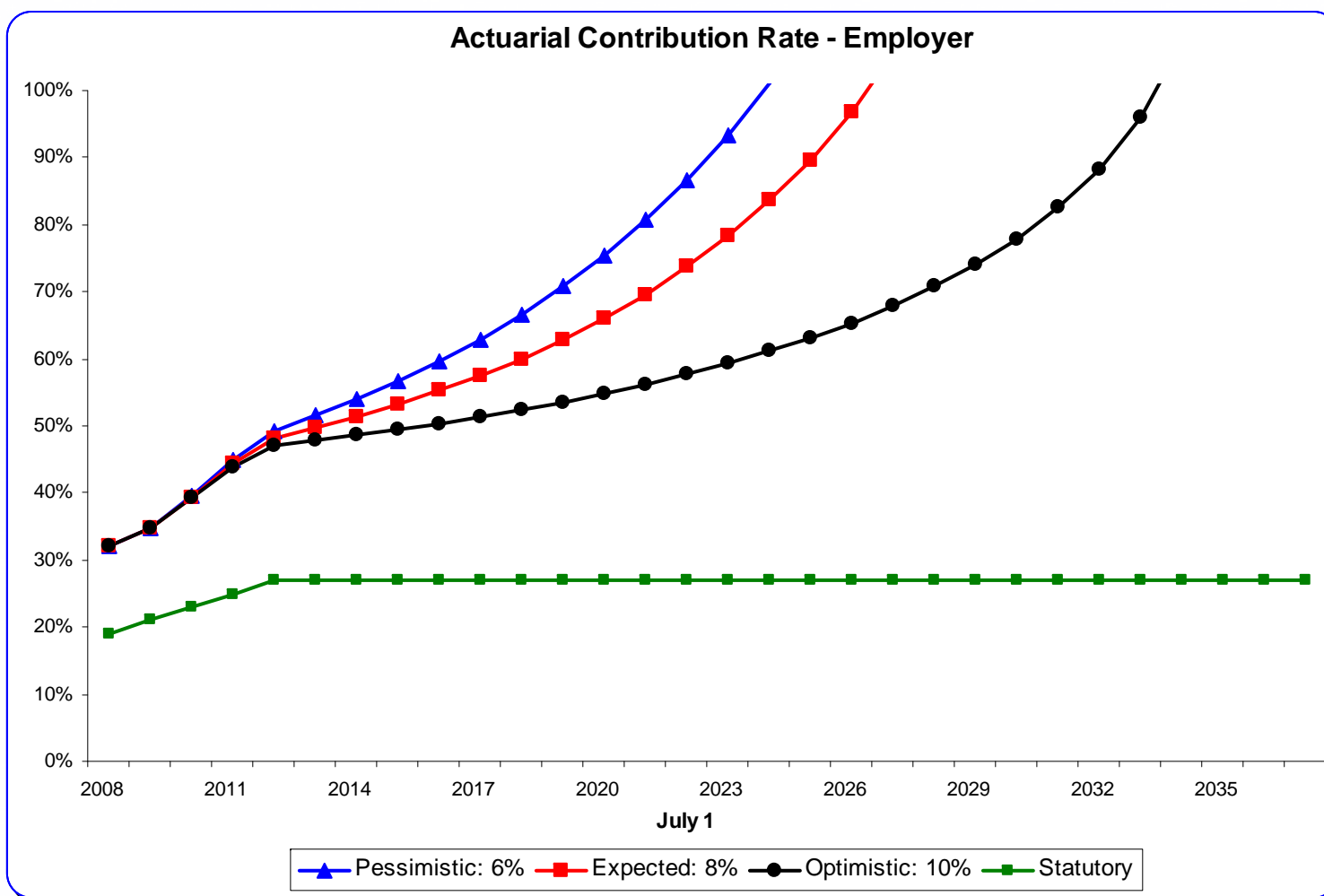
# *Sensitivity Analysis*

- Modeled three long term investment return scenarios
  - Pessimistic: 6% return
  - Expected: 8% return
  - Optimistic: 10% return
- To demonstrate the range of results and importance of investment return
- All other actuarial assumptions assumed to be met
- Constant active membership
- Current benefit structure
- Current statutory contribution rates

# Impact of Future Investment Return



# Impact of Future Investment Return



## Comments

- FY2009 investment return was a significant setback to the System's funding
- Actuarial assets > market value. Significant deferred losses (\$67M)
- Based on current statutory contribution rate, funded ratio will decline and actuarial contribution rate will increase (without offsetting gains from elsewhere)
- Concern over long term funding and sustainability of the System
  - Ways to impact long term funding
    - Higher return
    - More contributions
    - Lower benefits